

Dach-Facts: Retinal Degeneration (PRA)

Health & Welfare Information from the
Dachshund Breed Council



What is Retinal Degeneration?

The retina is the light-sensitive inner layer of the eye. Progressive Retinal Atrophy (PRA) is a general term for degeneration of the retina found in some breeds of dog (and in humans). Several breed-specific forms of retinal degeneration are caused by mutations in different genes.

The age at which deterioration in eyesight of affected dogs begins varies widely, from months to several years. The levels of visual impairment are also variable, with some affected dogs showing few problems even into old age.

Which varieties of Dachshund are affected?

Retinal degeneration was first documented in the Miniature Long-haired Dachshund (MLHD).

A DNA test was made available by the Animal Health Trust in 2005 that identifies a specific gene mutation known as **cord-1** (for Cone-rod Dystrophy). The identical mutation has been found in Mini Smooth and Mini Wire Dachshunds (MSHD/MWHD). The DNA test for the cord1 mutation applies to MLHD, MSHD and MWHD. We now know that there is a second mutation which affects the age of onset, but this cannot yet be tested for.

Research into retinal degeneration in the other varieties of Dachshund is under way in the UK, Scandinavia and the USA.

Advice for Puppy Buyers

If you are considering buying a Miniature Dachshund, you should:

- Ask the breeder whether the parents have been DNA tested for cord1 and if so what the results were
- Only purchase a puppy if one of the parents has been DNA tested "normal" (Clear) for cord1

- Avoid buying a puppy from a breeder who does not know the DNA **cord-1** status of the Sire and Dam of your MLHD, MSHD or MWHD puppy

At the moment, you do **not** need to ask a breeder about PRA in the other varieties of Dachshund (WHD, LHD, SHD).

Advice for Breeders

The demands on responsible dog breeders grow ever greater, but it is imperative that we all stay focused in order to maximise the chances that the puppies we breed will live a long, happy and healthy life, giving their owners the best possible dog owning experience.

The first important step is for breeders to DNA test **all** breeding stock **before** they are used to produce future litters.

This will tell you whether your dog/bitch is:

- a "Clear" (two copies of the normal gene),
- a "Carrier" (one copy of the normal gene and one copy of the mutant, **cord-1**, gene) or,
- an "Affected" (two copies of the **cord-1** mutation)

Use this information when selecting a genetically compatible mate. Avoid matings that are likely to produce "Affected" dogs. Be sure that when you do choose a "Clear" dog or bitch to breed from it is a good specimen of the breed.

Stud-dog owners should ask to see the Test Certificate of any bitch coming to their dog for mating. Likewise, owners of bitches should ask to see their planned Stud-dog's Test Certificate.

Where to find out more

Visit www.dachshundbreedcouncil.org.uk for the latest information and advice.